

REMARKS

In response to the office action mailed on August 13, 2008, applicant requests reconsideration. In the office action, claims 1 – 20 were rejected. Claims 1 – 20 remain pending in this application.

Claim Rejections – 35 U.S.C. §102

Claims 10 and 11 were rejected under 35 U.S.C. §102(e) as being anticipated by Kleppel (U.S. Pat. No. 7,020,809). This rejection is respectfully traversed, as Kleppel does not teach every element recited in independent claim 1, as is required for a proper rejection under 35 U.S.C. §102.

Independent claim 10 recites a data transmission system comprising:

a transmission device for transmitting command data elements to a downstream device, the command data elements being generated and transmitted according to a predetermined protocol; and

a reception device for receiving response data elements from the downstream device, the reception device including a protocol checking device for checking at least one state of the response data elements to determine the validity of the at least one state of the response data elements.

Kleppel teaches a system for verifying integrity of data signals communicated from a data transmit device 12 to a receive device 20 over a communication channel of limited bandwidth 15. Kleppel does not teach a transmission device for transmitting *command data elements to a downstream device*, the command data elements being generated and transmitted according to a predetermined protocol; and *a reception device for receiving response data elements from the downstream device, the reception device including a protocol checking device for checking at least one state of the response data elements* to determine the validity of the at least one state of the response data elements.

First, the channel or bus 15 is not a downstream device. It is a means for transferring data from an upstream device *to* a downstream device. Second, the bus does not act on the data passed therethrough. Therefore, the bus cannot convert a command data element to a response

data element simply by passing the data from one device to another. As described in applicants' Specification page 15, lines 13-22, the command data elements are transmitted to the downstream device and the response data element, which is a response to the corresponding command, is received from the downstream device. Therefore, the bus is not a downstream device and does not provide a response to a corresponding command.

Further, Kleppel does not teach a protocol checking device for checking at least one state of the response data elements to determine the validity of the at least one state of the response data elements. As describes in the Specification page 10, lines 1-5, the protocol of the host can be, for example, Fibre Channel, SCSI, ESCON or FICON and the protocol of the internal system is selected by the manufacturer of the system. It is very important that the correct protocol is followed in each portion of the system, Specification page 17, lines 4-6. Therefore, the invention recited in independent claim 10 includes a protocol checking device for checking at least one state of the response data elements to determine the validity of the at least one state of the response data elements. While Kleppel mentions that a communications protocol may be implemented in his system, he provides no mechanism for checking at least one state of the response data elements to determine the validity of the at least one state of the response data elements.

Accordingly, Kleppel does not teach or suggest every element recited in independent claim 10, as is required for a proper rejection under 35 U.S.C. §102.. Therefore, independent claim 10 is allowable over Kleppel, and the rejection under 35 U.S.C. §102 should be withdrawn.

Claim 11 depends from independent claim 10 and is allowable for at least the same reasons as independent claim 10.

Claim Rejections – 35 U.S.C. §103

Independent claims 1, 2, 6, 12 and 13 were rejected under 35 U.S.C §103 (a) as being unpatentable over Kleppel (U.S. Pat. No. 7,020,809) in view of Parr (U.S. Pub. 2002/0194571). This rejection is respectfully traversed, since, as set forth above, Kleppel does not teach that which the examiner relies upon it to teach and, even if the references were combined, the combination does not teach the invention recited in independent claim 1.

Independent claim 1 recites an error checking method comprising:

- A. receiving a data element including parity information;
- B. performing a parity check of the data element to determine whether the data element is valid;
- C. generating a CRC for the data element; and
- D. corrupting the generation of the CRC if the parity check performed determines that the data element is invalid.

The examiner admits that Kleppel does not teach corrupting the generation of the CRC if the parity check performed determines that the data element is invalid, and relies on Parr to teach what Kleppel does not. However, Parr also does not teach corrupting the generation of the CRC if the parity check performed determines that the data element is invalid.

Parr teaches a system for masking messages intended for a particular one of a plurality of receivers receiving messages on the same frequency in a satellite communication system. Since these messages are transmitted on the same frequency, Parr wants to avoid collisions of messages from different user terminals. Paragraph [0021], lines 1-3. Parr states that, in the event of a collision, it is possible that the *messages* will be corrupted. Paragraph [0023], lines 1-4. That is the only mention in Parr of anything being corrupted. There is no teaching or suggestion in Parr of corrupting the generation of a CRC if the parity check performed determines that the data element is invalid. As specifically shown in Figs. 6 and 8, Parr generates a CRC mask prior to the transmission of data and removes the mask upon reception of the data. After performing a parity check (Step 76, Fig. 8), if the data is valid, it is accepted. If not, it is ignored. See Paragraph [0028], lines 24-25. Parr does not have a need to, and therefore does not teach, corrupting the CRC.

Accordingly, the combination of Kleppel and Parr does not teach or suggest the invention recited in independent claim 1. Therefore, independent claim 1 is allowable over the combination, and the rejection under 35 U.S.C. §103 should be withdrawn.

Claim 2 depends from independent claim 1 and is allowable for at least the same reasons as independent claim 1.

Independent claim 6 recites an error checking system comprising:
an input device for receiving a data element including parity information;
a parity check device for checking the parity information of the data element to determine whether the data element is valid;
a CRC generator coupled to the parity check device for generating a CRC for the data element; and
an output device for transmitting the data element with the parity information and CRC to a downstream device over a transmission link;
wherein the parity check device is operative to output a corruption signal to the CRC generator if the parity check device determines that the data element is invalid, to instruct the CRC generator to corrupt the CRC generation for that data element.

The examiner admits that Kleppel does not teach a parity check device which is operative to output a corruption signal to the CRC generator if the parity check device determines that the data element is invalid, to instruct the CRC generator to corrupt the CRC generation for that data element and relies on Parr to teach what Kleppel does not. However, Parr also does not teach corrupting the generation of the CRC if the parity check performed determines that the data element is invalid.

As set forth above, Parr teaches a system for masking messages intended for a particular one of a plurality of receivers receiving messages on the same frequency in a satellite communication system. Since these messages are transmitted on the same frequency, Parr wants to avoid collisions of messages from different user terminals. Paragraph [0021], lines 1-3. Parr states that, in the event of a collision, it is possible that the *messages* will be corrupted. Paragraph [0023], lines 1-4. That is the only mention in Parr of anything being corrupted. There is no teaching or suggestion in Parr of corrupting the generation of a CRC if the parity check performed determines that the data element is invalid. As specifically shown in Figs. 6 and 8, Parr generates a CRC mask prior to the transmission of data and removes the mask upon reception of the data. After performing a parity check (Step 76, Fig. 8), if the data is valid, it is accepted. If not, it is ignored. See Paragraph [0028], lines 24-25. Parr does not have a need to, and therefore does not teach, corrupting the CRC.

Accordingly, the combination of Kleppel and Parr does not teach or suggest the invention recited in independent claim 6. Therefore, independent claim 6 is allowable over the combination, and the rejection under 35 U.S.C. §103 should be withdrawn.

Claims 12 and 13 depend from independent claim 6 and are allowable for at least the same reasons as independent claim 6.

Claims 3-5 and 7-9 were rejected under 35 U.S.C. §103 as being unpatentable over Kleppel and Parr as applied to claims 1 and 6, and further in view of Hong. This rejection is respectfully traversed.

Claims 3-5 depend from independent claim 1 and are allowable for at least the same reasons as independent claim 1.

Claims 7-9 depend from independent claim 6 and are allowable for at least the same reasons as independent claim 6.

Independent Claim 14 was rejected under 35 U.S.C. §103 as being unpatentable over Kleppel in view of Hurt (U.S. Pat. No. 6,954,885). This rejection is respectfully traversed, as Kleppel does not teach that which the examiner relies upon it to teach and, even if the references were combined, the combination does not teach the invention recited in independent claim 1.

Independent claim 14 recites a data transmission system comprising:
a data transmission device for transmitting data elements to a downstream device;
a data reception device for receiving data elements from the downstream device, the data reception device including:
an input CRC checking device coupled to receive the data elements from the downstream device for checking the validity of received data elements based on a CRC associated with each received data element;
a memory device coupled to the input CRC checking device for storing data elements received from the downstream device after the data elements have been processed by the input CRC checking device; and

an output CRC checking device coupled to receive the data elements from the memory device for checking the validity of the data elements based on the CRC associated with each data element.

As set forth above, Kleppel teaches a system for verifying integrity of data signals communicated from a data transmit device 12 to a receive device 20 over a communication channel of limited bandwidth 15. Kleppel does not teach a transmission device for transmitting command data elements to a downstream device, nor does Kleppel teach an input CRC checking device coupled to receive the data elements from the downstream device for checking the validity of received data elements based on a CRC associated with each received data element.

Accordingly, the combination of Kleppel and Hurt does not teach or suggest the invention recited in independent claim 14. Therefore, independent claim 14 is allowable over the combination, and the rejection under 35 U.S.C. §103 should be withdrawn.

Claims 15 - 20 depend from independent claim 14 and are allowable for at least the same reasons as independent claim 14.

Based on the foregoing amendments and remarks, applicant asserts that pending claims 1-20 are allowable over the prior art of record and respectfully requests that a timely Notice of Allowance be issued in this application.

In the event the Examiner deems personal contact desirable in the disposition of this case, the Examiner is invited to call the undersigned attorney at 508.293.7835.

Please charge all fees occasioned by this submission to Deposit Account No. 05-0889.

Respectfully submitted,

1/13/09
Date

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